February 23, 1953

Dr. Albert Tyler
Biology Lab.
Caltech
Pasadena 4, Calif.

Dear Dr. Tyler:

I would be interested to try sometime to set up some experimental trials to find auto-antibodies in bacteria. We are working on the flagellar H-antigens from another angle, but these may be good material for this purpose. We have no more than a very vague hint from previous experiments that would encourage these trials.

In fact, I have been led into this question from a different viewpoint, which can be phrased as the consideration of phage as an autoantibody. In Salmonella, certain phages can be identified as having for receptors the same somatic antigens as are identified by the usual serological techniques, i.e., the range of reactions of the phage with bacterial receptors coincides with the reactivity of these receptors with antibodies in immune rabbit sera. We do not know whether this specificity is entirely intrinsic to the phage particle, or whether it derives from the fact that the phage grows in the bacterial cell that synthesizes the receptor. If the latter is correct, I believe one could analogize phage with autoantibody in the sense I believe you have used.

I am writing now because I am not so well acquainted with the literature on the subject as I should be, and hoped you might send me reprints of your publications on it. Dr. Ray mentioned that you have recently prepared a rather comprehensive review, and if this is available it might be particularly useful.

Yours sincerely,

Joshua Lederberg
Associate Professor of Genetics